WATER MANAGEMENT IN ALBERTA

CHALLENGES FOR THE FUTURE

Alberta

ENVIRONMENT
Honourable Ralph P. Klein
Minister

WATER MANAGEMENT IN ALBERTA

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MINISTER'S MESSAGE

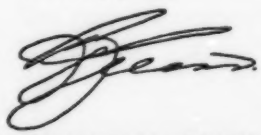
Alberta Environment is responsible for managing the province's water resources. The importance of this responsibility cannot be overemphasized. Water is essential to all human activity and it is one of Alberta's most important natural assets. Alberta is in the fortunate geographic position of managing a significant portion of the headwaters of two of the largest river systems in Canada. It is therefore essential that Alberta exercise wise management of its water resources in the interest of its own citizens as well as those of downstream provinces and territories.

Alberta has been active in the area of water management since the early 1900s when irrigation development began in southern Alberta. In 1931 the Alberta Water Resources Act was passed and it has served the needs of water users very well since that time. In the 1990s, increasing pressures are being placed on our water resources. Demands for water are growing and awareness of the problems and challenges facing us is greater than ever. To meet these challenges, Alberta Environment is using full public input to develop new water management policies and legislation.

This document represents the first step in that process. It is a discussion paper which outlines how water management is carried out by the government today, it identifies some of the issues facing us now and in the future, and it presents some questions for you to think about. I urge you to read this paper, consider the questions, and write down any comments or suggestions you may have. These comments can be sent directly to us or they can be discussed at workshops to be held across the province in the fall of 1991. You can also call 1-800-661-5586 with your ideas. Following the workshops, draft legislation will be prepared, based upon your input. After taking your views into account on the draft legislation, I will introduce final legislation in the fall of 1992.

I encourage you to work with us to develop Alberta's water management direction for the future. Your comments and contributions will be reflected in updated policies and legislation. I look forward to your participation.

Sincerely yours,



HONOURABLE RALPH P. KLEIN
Minister

WATER MANAGEMENT IN ALBERTA: THE NEED FOR REVIEW

Water is one of Alberta's most important natural assets. It is a primary, vital component of the environment and an important factor in balanced economic development. Sustainable water management means that water must be managed fairly to meet current needs without compromising the ability of future generations to meet their own needs.

The foundation of sustainable water management is sound government policy. Water management is crucial to our future and Albertans must be involved in policy discussions, the results of which will be the basis of updated water management legislation. This discussion paper is the first step in a public review of Alberta's water management policies.

Alberta has a long history of water management legislation. In 1894, the federal government passed the Northwest Irrigation Act which was designed to facilitate irrigation development, but it also regulated the use of water for other purposes. The underlying principles of the Act were the vesting in the Crown of the ownership of all water and the right of the Crown to distribute the water by issuing licenses. In 1930 the federal government released its jurisdiction over natural resources to the provinces. The principles and much of the wording of the Northwest Irrigation Act were incorporated into the 1931 Alberta Water Resources Act.

Since that time, changing demands on our water resources have required changes in the province's approach to water management. In 1980 the government released a document entitled "Water Management Principles for Alberta". This document outlined Alberta's water management policy at that time. While many of these policies remain the same today, some have been updated to reflect current water management needs. The recently announced South Saskatchewan River Basin Water Management Policy is an example. It updates policy statements for river basin planning, water conservation and the needs of instream uses such as fisheries and recreation. It also sets out new policy statements about irrigation expansion limits in southern Alberta, as well as the government's commitment to public consultation on water management issues. In January of 1990, the Alberta Government put forward a summary of general environmental policies and principles entitled "Alberta's Environment - Toward the 21st Century". These principles include statements on managing water quality and quantity, and sustainable development.

Water management has changed and new policies and programs have been developed to promote the wise use of this precious resource. However, much remains to be done. The Water Resources Act is essentially the same as it was in 1931. It is still primarily a mechanism for allocating water until supplies are exhausted. The Act must be changed to reflect changing water management circumstances in Alberta and to prepare for future challenges. This discussion paper is the beginning of the review process. In the following pages, five key water management challenges are outlined:

- INVOLVING THE PUBLIC IN DECISION-MAKING
- PLANNING FOR THE FUTURE
- PROTECTING OUR SURFACE AND GROUNDWATER RESOURCES
- USING OUR WATER RESOURCES WISELY
- COOPERATING WITH OTHER GOVERNMENTS

Each key challenge is explained, including details of what is being done now, what is needed for the future, and suggestions for public discussion.

This discussion paper is not meant to cover all of the issues and concerns. It is a starting point that will help you begin thinking about what you want to see in water management policy for Alberta. More detailed information will be required in many key areas to ensure a comprehensive policy discussion. Additional information is presented in a number of background papers which are available from Alberta Environment. The topic areas of these papers are listed on page 24.

INVOLVING THE PUBLIC IN DECISION-MAKING

What's Being Done Now

The Government of Alberta is committed to ensuring that Albertans will have every opportunity to understand and provide advice on decisions affecting our environment. Currently, there are three ways the public can be involved in water management:

1. Opportunities are provided for the public to participate in planning programs dealing with issues involving river basins or other specific areas. In this way, the public contributes to the water resources planning for the future.

2. Whenever a proponent wishes to undertake a major water management project, the proposal is subject to an environmental impact assessment (EIA) process before undergoing regulatory review under the Water Resources Act. The EIA process includes public involvement.

   The proposed Alberta Environmental Protection and Enhancement Act provides for an environmental impact assessment (EIA) process in which all major projects and others with potential adverse environmental impacts will be reviewed. The EIA process will allow for public notice of projects under review, public input into draft terms of reference for EIAs, public access to reasons for requiring EIAs and the opportunity for all interested parties to participate in public hearings on major projects. These hearings will be conducted by the Natural Resources Conservation Board (NRCB).

3. After a project has been approved in principle, approvals may be required under the Water Resources Act. Provisions in the Act require that the proponent publicly advertise details of the proposal in the local area. Any party may submit a statement of objection that the department must consider before making a decision.

What's Needed for the Future

The Water Resources Act requires only that applications for licenses be publicly advertised in the local area. It may be necessary to include other forms of public input in the legislation.

Some Points for Discussion

1. What are possible opportunities for public input to the river basin planning process?

2. Should the Water Resources Act contain provisions for different forms of public input such as meetings, etc.? The process could be flexible to satisfy the needs of the particular issue.

3. Who should be involved in public input to the approval process under the Water Resources Act?

PLANNING FOR THE FUTURE

River basin planning is a complex process and must include input from all users. River basins are natural boundaries, so planning is carried out on a river basin basis. Within each basin, human activity places demands on rivers, streams, lakes and groundwater. These demands include domestic (generally household), agricultural and industrial uses; municipal, agricultural and industrial waste disposal; and recreation, hydroelectric generation or transportation activities. In addition to human uses, rivers and lakes support a diverse ecology of fish, wildlife and vegetation species. All of these competing demands for water must be addressed in the river basin planning process.

River basin plans have been developed for the South Saskatchewan River Basin and for the Cold Lake-Beaver River Basin. In the South Saskatchewan River Basin, specific concerns over water supplies led to the development of plans to limit water withdrawals. A maximum water allocation for irrigation purposes has been established for the Red Deer, Bow, Oldman, and South Saskatchewan River Basins. In the Cold Lake-Beaver River Basin, plans were developed to encourage water conservation through recycling.

In addition to the water resources planning carried out by Alberta Environment, other government agencies are involved in planning exercises which have an influence on water. These include integrated resource planning by Alberta Forestry, Lands and Wildlife on public lands, regional land use planning conducted by regional planning commissions and local planning by municipal governments. All of these processes have the potential to influence land uses which in turn may affect the quality and quantity of water in our rivers and lakes.

What's Being Done Now

Multiple use of the water in the province's river basins is an underlying principle of water management in Alberta. Full consideration is given to the advantages and disadvantages of managing water for each potential use. Multiple use, however, does not mean that all possible uses will be accommodated by a single project or management guideline. It does mean that regionally and provincially, all interests will be considered and accommodated whenever possible.

Water planning and management is also supported by an extensive data collection and interpretation program. This program provides information on streamflows, lake levels, groundwater and water quality which is used as the basis for decisions on volumes of water to be used and the type and quality of effluent discharges.

What's Needed for the Future

The Water Resources Act does not mention river basin plans and provides no statutory authority for their implementation. Since river basin plans sometimes set out water management objectives, guidelines, and principles that differ from the water allocation rules established in the Act, they may not always be legally enforceable.

The influence of land use activities such as agriculture, forestry and mining on water quality and quantity is a growing concern. These activities may result in the drainage of wetlands and erosion of soils resulting in sedimentation of water resources. The current legislation does not address the need to coordinate land and water planning in order to minimize these impacts. Land use planning is the responsibility of other provincial agencies and municipal governments.

If water management objectives are to be met, the relationship between land and water must be investigated fully and accounted for in planning exercises. This may require the translation of water management objectives into land use guidelines which may be incorporated into regional plans, land use bylaws and integrated resource plans.

Some Points for Discussion

1. What is the role of the river basin planning process in water management decision-making? How can legislation help clarify this role?

2. How should water management decisions be made in basins where the planning process has not started or is incomplete?

3. What objectives or guidelines should be addressed in a river basin plan?

   For example

   - The value of water as a sustainable resource.
   - Surface and groundwater withdrawal or effluent discharge limits.
   - Instream water quality and quantity objectives or guidelines.
   - Restrictions on land use activities which may have an impact on water resources.
   - Water conservation and recycling guidelines or measures.
   - Water management guidelines for emergency conditions such as droughts or floods.
   - Other measures/policies/actions required for long term protection, improvement and wise use of the water resource.

4. What should be the relationship of the integrated resource planning process to the river basin planning process?

5. What relationship should other planning activities have with the river basin planning process?

6. What information does the public need on the quantity and quality of surface and groundwater?

PROTECTING OUR SURFACE AND GROUNDWATER RESOURCES

The protection of the ecological integrity of Alberta's water resources to ensure their enjoyment by future generations is a challenge. Responsible water management means balancing the demands of domestic, municipal, agricultural, industrial and hydroelectric water power users with the need to protect fisheries, wildlife, recreational, aesthetic and intrinsic values of the resource.

MINIMUM/PREFERRED FLOWS

What's Being Done Now

To protect instream flow needs, minimum flows are being established on an individual river reach basis and these flows will be maintained to protect basic water quality and instream needs. Preferred flows are being established on an individual river reach basis to protect desirable instream needs. Habitat for fish resources in provincial waters is protected as one of the recognized instream water uses.

A similar level of protection is provided to groundwater aquifers. All major groundwater users are required to show that their level of water usage will not have an impact on surrounding users or the aquifer before a license can be issued. In this way, the province ensures that groundwater use does not exceed the long-term sustained yield of the aquifer.

What's Needed for the Future

The Water Resources Act was primarily designed to license the consumptive uses of water and is not effective at recognizing that certain flow quantities are necessary to maintain the overall health of rivers and streams, and the fish, wildlife and vegetation they support. Under current legislation the protection of instream flows can only be achieved if applications for licenses which may interfere with the stated instream flow requirements are rejected. Similarly, the protection of groundwater aquifers can only be achieved if applications for licenses which exceed the long term sustained yield of the aquifer are rejected.

Some Points for Discussion

1. How should basic and desirable instream flow needs be defined?

2. How should instream flow needs be met during natural low flow periods?

3. Is it acceptable to express the government's commitment to protecting instream flows by way of policy or is legislation needed? What options can be considered to protect instream flows?

4. Are there other options for ensuring groundwater protection? Should these options be legislated?

WATER QUANTITY/QUALITY RELATIONSHIP

What's Being Done Now

The relationship between water quantity and quality must be considered in all water management activities.

Water quality is regulated under the proposed Alberta Environmental Protection and Enhancement Act whereas water quantity withdrawals are regulated under the Water Resources Act. Alberta Environment ensures that quality and quantity considerations are addressed in both water withdrawal and effluent discharge license applications.

What's Needed for the Future

Maintaining the environmental quality of our lakes, rivers and groundwater requires that standards for water withdrawals complement standards for effluent discharges to watercourses. It is essential that the relationships between streamflow and water quality be considered in all aspects of water resource management, since water withdrawals can affect the overall ability of a watercourse to absorb the impacts of agricultural, industrial or municipal developments.

Some Points for Discussion

1. Should water quality guidelines or objectives for Alberta's rivers be established before allocating water?

2. What are the most appropriate means to support the integration of water quality/quantity relationships in all water management decisions? (i.e. by policy statement? provisions in legislation?)

ENFORCEMENT

What's Being Done Now

If legislation is contravened, appropriate enforcement action is taken. Ministerial Orders and prosecution are relied on to ensure compliance.

The Water Resources Act allows fines and penalties to be levied when water resources legislation has been contravened. The penalties for individuals are fines of up to $2,000 per offence or imprisonment of up to six months. In the case of a corporation, a fine of up to $10,000 can be prescribed. Alberta Environment's approach has been to work with the party involved in order to correct the problem before taking legal action.

Since contravention of water resources legislation often affects activities and mandates of other government departments, most violations are reviewed by an interdepartmental committee to ensure that appropriate enforcement action is taken. This cooperation and sharing of information has meant that, in many cases, charges have been laid jointly under the Water Resources Act, the Public Lands Act and the Federal Fisheries Act.

What's Needed for the Future

Violations of water management legislation may need to be dealt with in a similar manner as proposed in the draft Alberta Environmental Protection and Enhancement Act. The Act provides for "enforcement orders" to be issued by the Director, civil court orders and injunctions, and penalties to a maximum of $1,000,000 and two years in jail. Additional fines are based on monetary gains made while in violation of the legislation.

Some Points for Discussion

1. What enforcement measures and/or penalties should be applied to water resource violations?

WETLANDS

What's Being Done Now

A policy for managing wetlands in Alberta's settled area has been proposed by the Alberta Water Resources Commission in cooperation with a number of provincial government departments. Public input has been obtained on this draft policy and the final policy is now being written for presentation to the government.

The draft policy states, in part,

"The Government of Alberta will ensure the conservation and management of wetland resources in the settled area of the province to sustain the agricultural, environmental, economic and social benefits that wetlands provide".

Although Alberta Environment has no specific written policy statement regarding wetlands, the drainage of permanent wetlands is not allowed. Licenses for the drainage of semi-permanent wetlands have been issued providing there were no impacts on downstream landowners.

Alberta Environment is committed to protecting wetland resources and policies adopted by the government will be incorporated into water management legislation.

Some Points for Discussion

1. Several statements were raised for discussion during the workshops on wetlands policy hosted by the Alberta Water Resources Commission in the fall of 1990. (Please refer to the Commission's discussion paper on wetlands included in the list of background papers.)

LAKE MANAGEMENT

Alberta's many and varied lakes are an important provincial resource and provide enjoyment and benefits to users from across the province and beyond. Different uses dictate different preferences in lake management. In addition to the issue of water level regulation, an increasing concern is the disturbance of lake beds and shores. Lakeshore developments and adjacent agricultural practices are causing water quality concerns. Surface/groundwater interaction and its impact on lake levels is not well understood.

What's Being Done Now

There is no stated policy regarding lake management; however, Alberta Environment is actively involved in monitoring lake levels and water quality, regulating bed and shore disturbances, authorizing lake stabilization structures, resolving conflicts and responding to concerns regarding flooding or drought. To date, more than 25 Alberta lakes have some structural means to control outflow and water levels.

In cooperation with local authorities, Alberta Environment has developed lake management plans for 20 important provincial lakes. In addition, Alberta Environment also advises planning commissions and local authorities on issues related to private developments adjacent to lakes, such as sewage disposal, water supply, groundwater level impacts and surface water quality.

What's Needed for the Future

Alberta lakes are subject to increasing pressure from recreational users and from development on their shorelines and drainage basins. The Alberta Government may need to take a stronger role in regulating these uses to ensure that lake levels and water quality are protected.

Some Points for Discussion

1. Should governments take a more active role in managing lake levels or should nature be left to take its course?

2. What role should the various levels of government take in managing lake water quality?

USING OUR WATER RESOURCES WISELY

Water is a valuable resource and an integral component of the environment. Wise use implies water conservation and demand management and recognizes that sustainable water management practices must be pursued. Sustainable development has been defined in international literature in various ways. For the purposes of this paper, sustainable water management is "Managing water to meet current needs fairly without compromising the ability of future generations to meet their own needs."

ALLOCATION OF WATER

What's Being Done Now

Ownership of all surface and groundwater rests with the province. Individual rights are granted in the form of licenses in accordance with legislation. These rights and their priority, established by the date of application, will be respected. Inspection, monitoring, and enforcement are used to support the legislative and regulatory requirements. The province will reserve water when a pre-determined level of allocation to licensed users and instream flow requirements have been reached. A system of preferential use is used to determine further allocation of water.

Licenses specify the quantity of water that licensees are entitled to withdraw from surface waters or groundwater aquifers, the corresponding rate of withdrawal, and the land or undertaking to which the license is attached. The Act does not recognize riparian or common law rights to the use of water. However, it does allow the owner or occupant of land to divert the quantity of surface or groundwater required for domestic (generally household) purposes without a license.

Licenses are generally issued without term and are transferable only in very limited circumstances. Transfer to a new owner of the affected lands or undertaking is handled quite easily whereas transfer to a new location or new undertaking requires an Order of the Lieutenant Governor in Council.

The priority between licenses is governed by the principle "first in time - first in right." This means that the priority for withdrawal of water is determined by the date of filing of the application for license. In the unlikely case that two or more applications for license are received on the same day for water from a common source, the priority amongst the applications is determined by the proposed use of water as follows:

i) domestic purposes
ii) municipal purposes
iii) irrigation and other agricultural purposes
iv) industrial purposes
v) water power purposes
vi) other like purposes

What's Needed for the Future

Allocation of water may be the most important issue raised in this policy review. The existing legislation does not adequately address current needs in many areas.

1. The problem of fully allocated streams, basins or groundwater aquifers is not addressed. When the available flow in a watercourse or aquifer has been licensed there is no water available to new users or to meet instream flow needs. Existing licenses cannot be easily transferred to new uses or locations as conditions warrant.

2. A strong legal basis is not provided to promote allocation decisions based on objectives and guidelines developed through river basin planning programs.

3. During times of water shortage, there is no management flexibility. Older licenses (those with a 'higher' priority) are guaranteed their supply of water before junior licenses. There are no legislated provisions to allow for cooperation and sharing during low water conditions.

4. The maximum level of allocation per river basin and groundwater aquifer is not specified. This is especially a problem in times of water shortages as noted above.

5. Domestic water users may not have legally protected rights to water. Under existing legislation, there is no requirement for a domestic (generally household) water user to obtain a license. Existing administrative provisions, however, ensure that domestic water users are given preference in all water resources planning. Concerns have been expressed that this is not adequate and that legally protected domestic water rights are required.

Some Points for Discussion

1. Should the sale or transfer of water licenses or portions of licenses be allowed with some form of government control?

2. What restrictions should be placed on such sale of licenses? (e.g. protection of instream flow levels, setting minimum and maximum flows for irrigation canals, protection against speculative sale of water rights, etc.)

3. Should the sale or transfer of water rights be allowed between sectors of the economy, such as irrigation, industry, or municipalities?

4. Should new licenses be issued for a fixed term? If so, what should that term be?

5. Should water management legislation be flexible enough to recognize objectives and guidelines developed through planning programs?

6. What should be the maximum level of water allocation per river basin or groundwater aquifer?

7. Should the rights of domestic water users be addressed?

GROUNDWATER WITHDRAWALS

What's Being Done Now

With continuing economic development and population growth, there is an escalating demand on groundwater for domestic, municipal, agricultural and industrial uses.

In response to public concerns, the use of potable groundwater for oilfield injection purposes, within agricultural areas of the province, is restricted to a maximum of one half of the long term yield of a given aquifer in the vicinity of the water well. All initial approvals are limited to a one year time period. Five year extensions are granted only if all required conditions are met and no applications which exceed the remaining available aquifer capacity have been received from the surrounding community.

What's Needed for the Future

Existing legislation does not provide the legal framework for adopting a policy that restricts groundwater usage. In addition, the Water Resources Act provides for licenses without term. The issuance of term licenses, necessary in this case to satisfy local concerns over the impact of these withdrawals, is not supported in the legislation.

Some Points for Discussion

1. Should potable groundwater be used for other purposes other than domestic uses, such as oilfield injection or irrigation?

2. If so, what quantity or amount of groundwater withdrawal should be allowed for these purposes?

WATER MANAGEMENT PROJECTS

Albertans benefit directly and indirectly from reservoirs, stabilized lakes, canals, water supply systems, erosion control works and the many other water management projects which have been developed throughout Alberta over the years. These projects provide a variety of benefits by mitigating the effects of flooding, erosion, or drought; enhancing water based recreation, fish, waterfowl and wildlife habitat; and promoting water conservation. Examples of these projects include the Waterton-St. Mary Water Management Headworks in southern Alberta, the Pigeon Lake stabilization works and the Dickson and Paddle River Dams in central Alberta, the Grimshaw and Kleskun Hills erosion and flood control channels, and the Hutch Lake project in northern Alberta. These projects represent a significant investment by Alberta, and because of the dynamic nature of water, require constant maintenance and periodic rehabilitation.

What's Being Done Now

The Water Resources Act allows the province to construct, operate, maintain and repair any works necessary in the best interest of Alberta. A good example of this is the government's ownership and operation of water management headworks in southern Alberta. Through control and rehabilitation of these major on-stream water headworks, the government assures a continuous water supply to irrigation districts, many municipalities, and other water users in southern Alberta and ensures that Alberta's obligations to downstream jurisdictions are met. Multiple use of these water storage and conveyance facilities is an underlying principle.

The Act also allows for the province to enter into agreements with local governments to share in the cost of projects which encourage local and regional development of the water resource. Existing programs involving both the province and local governments provide cost sharing at set levels which generally reflect the benefits to the public. In some cases, individuals who directly benefit from a project are charged costs.

Some Points for Discussion

1. What role should the province have in developing future water management projects and in mitigating the damages caused by water in its natural state?

2. How should the distribution of costs to direct beneficiaries, local governments and the public be determined for the construction, operation, maintenance, and rehabilitation of water management projects?

WATER CONSERVATION

What's Being Done Now

In Alberta, individuals are responsible for using water without waste. Water users may voluntarily take action to improve water use efficiencies, reduce water losses and excessive water use, use water conservation technology, and reuse water. Rehabilitation of the province's water management headworks systems and the irrigation districts' main canal and distribution systems in southern Alberta is an ongoing activity that results in conservation of water supply. In northern Alberta, water recycling guidelines for in-situ oil sands projects result in conservation of the water resource.

What's Needed for the Future

The Water Resources Act does not define water conservation, nor does it provide direction or incentives for users to conserve water or to appreciate the true value of the resource. The Act does not provide for linkages with other statutes, such as the Irrigation Act and the Municipal Government Act, to facilitate the implementation of water conservation techniques at the individual level. This type of relationship with municipal governments and other administrative jurisdictions is essential to implement a comprehensive water conservation program. Additionally, the Act does not legislate requirements for universal metering or conservation oriented water charges and rate structures for consumptive users.

Some Points for Discussion

1. Should water conservation initiatives be addressed in policy and legislation?

2. What water conservation options and strategies could be legislated? One of the options is demand management which focuses on non-structural techniques to reduce the demand for water. Further information on these options are available in the background paper on water conservation.

3. Should water conservation include the maintenance of instream flows, water quality and aquatic ecological processes?

4. Should water charges and rate structures that encourage water conservation be established for consumptive users?

REDUCING RISKS ASSOCIATED WITH NATURAL HAZARDS

The Alberta Government is committed to sharing responsibility with the public and local authorities, to reduce the risks associated with hazards such as flooding, drought, and the failure of water management structures.

What's Being Done Now

The risk to life, property and the environment due to dam failure must be reduced to the lowest practical level. Consequently, Alberta Environment requires adherence to existing dam and canal safety guidelines in the design, construction and operation of these works. In addition, all existing structures are continually monitored to ensure structural integrity.

The government supports floodplain management to minimize flood damages. In partnership with the federal and local governments, flood risk mapping and designation of flood risk areas is used to discourage permanent urban development in those portions of floodplains that have a probability of one or more floods every 100 years.

Alberta also has a 'state of the art' flood forecasting system to provide riverflow information and flood warnings to Albertans.

Other options considered for floodplain management include flood control structures, warning systems and non-structural solutions to flood damages such as land use planning, land purchase, flood proofing, and flood preparedness.

In the past, financial assistance has been available to rural Albertans whose water supplies were affected by drought. This assistance helped rural landowners develop more secure drought resistant water supplies.

What's Needed for the Future

Under existing legislation, the Lieutenant Governor in Council may designate flood control areas. The Minister may acquire lands within these areas for flood protection or prohibit or regulate the use of land within the flood control areas. This approach does not recognize the cooperation and sharing of responsibility with all levels of governments and landowners.

New water management policies and legislation must address the needs of water users in drought areas. These needs have traditionally been met by emergency drought assistance programs administered by Alberta Environment, Alberta Agriculture and Agriculture Canada.

Some Points for Discussion

1. How should development in floodplains be controlled?

2. What role should the Water Resources Act have in controlling this development?

3. What options should be considered for addressing drought problems over the long term?

INTERBASIN TRANSFER

What's Being Done Now

Alberta has five major river basins: the Milk, South Saskatchewan, North Saskatchewan, Athabasca and the Peace. By definition, an interbasin transfer means a transfer of water from one of these major river basins to another.

Alberta's policy states that the waters of each major river basin must be fully and efficiently utilized before interbasin transfer can be considered.

WATER NOT FOR EXPORT

What's Being Done Now

Alberta will not be party to any undertaking for the possible export of water beyond Canadian borders. This is a long standing government policy against the export of water. The priority of water use and allocation is based firstly on provincial, secondly on interprovincial, and finally on national considerations, and will not be influenced by international considerations.

COOPERATING WITH OTHER GOVERNMENTS

In its water management responsibilities, Alberta Environment is committed to the government's principles of demonstrating leadership and working cooperatively with other levels of government.

INTERJURISDICTIONAL COMMITMENTS

What's Being Done Now

The Government of Alberta cooperates with other provincial and territorial governments and the Government of Canada in the regulatory aspects of interprovincial waterways and in joint activities to provide the physical data necessary for water management decisions. The Minister of the Environment maintains a continuing liaison with the federal, provincial and territorial governments and enters into agreements on behalf of the Government of Alberta.

The Master Agreement on Apportionment, signed by the Governments of Alberta, Saskatchewan, Manitoba and Canada in 1969, has been a very effective transboundary water management agreement. Under this agreement, Alberta is required, in general, to pass 50% of the natural flow of the eastern flowing rivers to Saskatchewan. The Master Agreement is administered by the Prairie Provinces Water Board. The Board provides a forum for information sharing and dispute resolution.

Alberta is also a member of the Mackenzie River Basin Committee and is working cooperatively with the other jurisdictions in the basin to improve the information available on the water resources and to develop transboundary water management agreements, as recommended in the 1982 Mackenzie River Basin report. An information base and a common understanding of that data base are essential both to the negotiation of sound transboundary water management agreements and to the future management of the water resources of the Mackenzie River Basin.

SHARED RESPONSIBILITY

What's Being Done Now

Municipal governments and other administrative jurisdictions throughout Alberta have a very important role in water management. The Government of Alberta shares responsibility with these jurisdictions and with individuals to provide effective water management at a local and regional level. For example, the sub-basin water management plans being developed for northwestern Alberta will provide guidance and direction to provincial and local governments for the development, protection and wise management of the water resources of the Peace River district. These plans will also provide the basis for local governments to set water management priorities within their municipal boundaries with due consideration for the impact on other resources.

Technical and financial assistance programs which encourage environmentally compatible regional solutions to water management concerns are available to local governments and individuals. Technical assistance is also available to individual landowners for the design and construction of projects which encourage sound water management.

Some Points for Discussion

1. How can shared responsibility for water resource management be emphasized in the legislation?

HOW YOU GET INVOLVED

The review process for updating water management policies and legislation will have two distinct stages of review: one for policy development and one for review of draft legislation. In both stages a variety of methods are available for you to provide input:

Policy development - summer and fall, 1991

1. Responses to this Discussion Paper

   The enclosed sheet can be used to record your comments. A postage paid return envelope is provided.

2. Alberta Environment Toll-Free Telephone Number - 1-800-661-5586

   You can telephone this number at any time throughout the process to request additional information or provide comments. Staff will offer information on the review process, answer questions, and ensure that requests for information are recorded and met.

3. Regional Information Outlets

   Staff at Alberta Environment's six regional offices (Lethbridge, Calgary, Red Deer, Edmonton, Grande Prairie, Peace River) and the Alberta Environmental Centre (Vegreville) will answer questions on the review process and ensure requests for information are satisfied.

4. Responses to Background Papers

   As mentioned earlier, additional information is available in a number of background papers. The topic areas of these papers are listed below. Please call or visit any of Alberta Environment's offices to obtain copies of these papers.

5. Awareness Meetings

   Awareness meetings with stakeholder groups, municipal associations, and other government departments will be held on request. These meetings will be used to outline the review process, explain and clarify issues and indicate how the groups can participate effectively in the process.

6. Public Workshops

   The workshops are tentatively scheduled for the fall of 1991 (14 locations throughout Alberta as shown on the following map). Further information on specific dates and times will be announced. The workshops will facilitate a constructive discussion of the issues amongst all participants.

7. Summary

   A summary report of public comments will be distributed after the workshop sessions.

Review of Legislation - spring/summer 1992

All of the comments and suggestions received will be used in the development of new policy statements and draft water management legislation. These new policies and draft legislation are scheduled to be released in the spring of 1992. Regional meetings will then be held at five locations throughout Alberta to obtain input on the draft legislation. In addition, you will also be able to use the existing public input mechanisms developed in the policy development stage.

- written responses
- toll-free telephone number
- awareness meetings
- regional information outlets

After public input to the draft legislation is completed, a final bill will be introduced in the fall of 1992 for approval by the Legislative Assembly of Alberta.

For further information on this process or to record your comments on water management policies and legislation, please visit any of Alberta Environment's offices, the office of the Alberta Water Resources Commission or call Alberta Environment's toll-free telephone number (1-800-661-5586) or return the response form included in this paper.

BACKGROUND PAPER TOPICS

Volume 1
* Alberta's Water Resource

Volume 2
* History of Water Management Legislation in Alberta
* Water Rights
* Enforcement

Volume 3
* Aboriginal Water Issues

Volume 4
* Public Involvement
* Cooperating with Other Governments

Volume 5
* Water Resources Planning
* Instream Flow Needs
* Water Quality/Quantity Relationship
* Lake Management

Volume 6
* Water Conservation
* Water Pricing

Volume 7
* Groundwater Management

Volume 8
* Water Management Projects
* Operation and Maintenance of Water Management Projects
* Water for Irrigation
* Hydroelectric Development

Volume 9
* Environmental Impact Assessment

Volume 10
* Flood Damage Reduction

Volume 11
* Role of the Alberta Water Resources Commission (AWRC) in Water Management

Volume 12
* Wetlands: Values and Options - A draft policy for the management of wetlands in the settled area of Alberta (prepared by AWRC)

Please call Alberta Environment's Toll-Free telephone number, 1-800-661-5586 or call or visit any of Alberta Environment's offices to obtain copies of these papers.

Alberta Environment Offices

Corporate and Strategic Management
3rd Floor, Oxbridge Place
9820 - 106 Street
EDMONTON, Alberta
Ph: 427-0047

Standard Life Centre
15th Floor, 10405 Jasper Avenue
EDMONTON, Alberta
Ph: 427-5296

Provincial Building
9621 - 96a Avenue
PEACE RIVER, Alberta
Ph: 624-6167

Provincial Building
4920 - 51 Street
RED DEER, Alberta
Ph: 340-5310

Deerfoot Square
2938 - 11th Street NE
CALGARY, Alberta
Ph: 297-6582

Provincial Building
200 - 5 Avenue, South
LETHBRIDGE, Alberta
Ph: 381-5399

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10320 - 99 Street
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VEGREVILLE, Alberta
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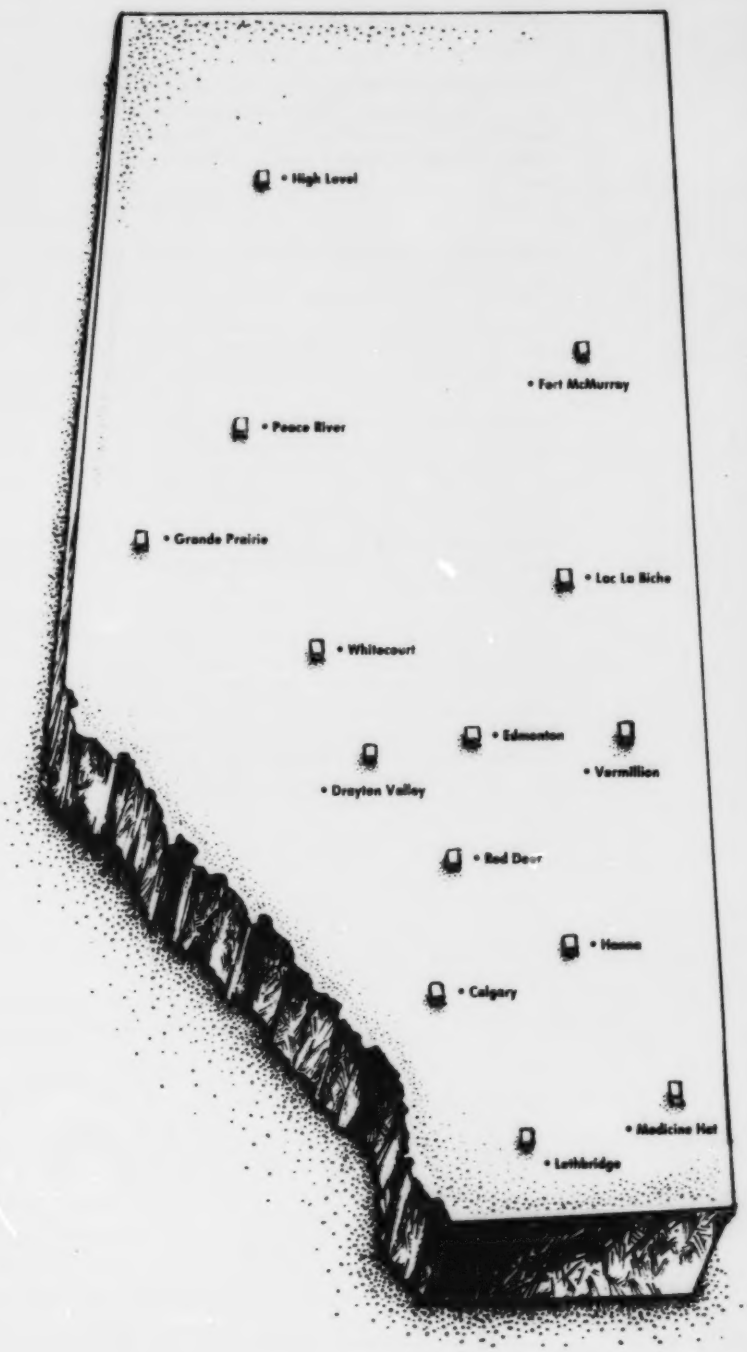
Ph: 632-6761

Alberta Water Resources Commission

910 Harley Court
10045 - 111 Street
EDMONTON, Alberta
Ph: 422-4232

Location of Public Workshops - Fall 1991



Please feel free to make copies of this paper

GLOSSARY OF TERMS USED

aquifer: An underground layer of porous rock, sand, etc., containing water into which wells can be sunk to obtain water supplies.

demand management: This approach to water resource management differs from supply oriented approaches and emphasizes policies that influence the uses to which the resource is put. Demand management reduces the quantity of surface or groundwater withdrawn from the source and controls the extent to which return flows are degraded or polluted.

effluent: Waste material discharged into a watercourse (see watercourse below)

headworks: Provincially owned and operated works, such as dams, diversions, canals and other hydraulic structures, which provide secure water supplies for irrigation and other multi-purpose uses.

integrated resource planning: A process used to develop the Government of Alberta's resource management policy for public land and resources. Government agencies, the public and industry participate in this process. Resources and activities that are commonly addressed by these plans are: Access, Agriculture, Ecological Resources, Fisheries, Historical Resources, Minerals, Range Resources, Recreation, Tourism, Timber, Water and Watershed, and Wildlife.

instream flow needs: The streamflows required to provide for uses that depend directly or indirectly on water flowing in a stream. These uses include habitat for fish, other aquatic organisms and wildlife; recreational uses, both instream as well as recreation that takes place adjacent to a stream or enhanced by streamflow; maintenance of riparian ecosystems; and in some cases, navigation or the operation of run-of-river hydroelectric plants.

Ministerial Order: A directive issued by the Minister of Environment under the authority of the Water Resources Act.

Order of the Lieutenant Governor in Council: A government decision approving a particular course of action recommended by the Minister of Environment. The decision must also be approved by the Lieutenant Governor of Alberta.

potable water: Drinkable water; water used for drinking, cooking, bathing, dish washing or other domestic purposes.

riparian: Situated on or pertaining to the banks of a river or body of water.

river basin: The land area which drains to a river or its tributaries.

river reach: The stretch of a river system designated for a specific purpose or use.

statutory authority: Having the authority (legal right) by virtue of an established rule, formal regulation, or a law passed by the Legislative Assembly of Alberta.

watercourse: Any artificial or natural channel for the conveyance of water, e.g. a canal, stream, drainage tunnel, ditch, etc.

water right: The legal right possessed or acquired by an individual to the diversion and/or use of water.

wetlands: Depressions or low areas on the land surface where water collects. Eg. sloughs, marshes, and bogs.

YOUR IDEAS AND SUGGESTIONS?

KEY CHALLENGE: Involving the Public in Decision Making

KEY CHALLENGE: Planning for the Future

KEY CHALLENGE: Protecting our Surface and Groundwater Resources

KEY CHALLENGE: Using our Water Resources Wisely

KEY CHALLENGE: Cooperating with Other Governments

To help us update our mailing list, please advise us whether you wish to receive further materials such as draft policies and legislation.

☐ **Yes** I would like to receive further materials regarding this review.

☐ **No** I do not wish to receive further materials.

* The enclosed postage paid return envelope has been provided for your convenience.